

## **CHAPTER III**

### **RESEARCH METHODOLOGY**

This chapter explains several terms related to processing the data; they are research design, research subjects, procedure, data collection, instrument, and data analysis.

#### **3.1 Research Design**

The term of research design refers to general plan while conducting the research. Cresswell (2014) mentioned that the plan design includes the method for collecting data, analysing data, and reporting research. In academic research, methods are divided into three types, namely qualitative, quantitative, and mixed methods. Qualitative research totally focuses on general understanding and interpreting a phenomenon rather than variables description (Ary, 2010). Meanwhile, quantitative research uses objective measurements and concerns with the explanatory variables as the result (Ary, 2010). Further, Ary (2010) defined mixed-methods as the creative way to utilize the strengths of each approach. In line with this, the researcher implemented a mix methods approach to conduct a research. The quantitative research is designed to investigate whether or not Digital Storytelling (DST) can improve the speaking ability, whereas the qualitative is designed to investigate the students' perception while implementing DST in speaking class.

### **3.2 Research Subjects**

In the process of data collection, a researcher involved six male students English for Specific Purpose (ESP) at University of Muhammadiyah Malang they are from Communication Science in the second semester. Those research subjects were selected based on the lecturer recommendation. The lecturer decided to assign these six students because most of them are good in using digital tools for producing the video. It is proven by their previous digital project and also on the preliminary observation by conducting the interview with the lecturer. The ability of students to operate the digital tools is line with this research concern which is related to the use of learning English. Moreover, in this university, all freshman is required to join ESP the since first to the second semester. During one year, the freshman will get the basic materials of language skills, those are listening, speaking, reading, and writing.

### **3.3 Data Collection**

Ary (2010) mentioned that collecting data in research is a tool to gather the information. This section compiled the techniques, instruments, and procedures to obtain the data in the research.

#### **3.1.1 Techniques**

##### **1. Observation**

Technique in collecting data for this research was observation. The observation method used was participant observation. It required the researcher involvement in the classroom and integrate with the student's activity. Zohharbi (2013) stated the participant observation method enabled the researcher to know

more about the behaviour of the research subjects. In the participant observation method, the researcher might observe particular attention to details record objectively. In this research, researcher involved in teaching and learning process to give the treatment for an independent group.

Moreover, Fraenkel and Wallen (2003) proposed two types of participation observation method; those are Narrow and Broad Focus observation. The first type is the narrow focus, this method concerns a single element in a classroom or students' activity. The second method is the broad focus; this observation focuses on all the classroom or students' activity. This research applies narrow focus observation because this research only focuses on speaking students' activity.

## **2. Test**

In quantitative text, the researcher used performance test. The performance test is used to measure the ability of individuals verbal performance in speaking skill. In this research used video production as the tool for testing the performance of students to tell a narrative story. The test is a tool to reach the response of the subjects on the numerical score basis. Numerical scoring is the indicators to construct the objectivity, the validity, and the reliability of the test (Ary, 2010).

To ensure the validity of data, the participants were told not to use other media, such as: YouTube, Apps, etc. It means, the only treatment they accepted to enhance their speaking skill from DST. As a result, to obtained the data had strong validity.

### **3. Interview**

The further technique in collecting data is interviewing, the researcher applies semi-structured interview to obtain the students' perception about DST in depth. According to Ary (2010) interview is the data relate to the opinions, beliefs, and feelings of the research subject. Also, the interview help research to understand the experiences the subject to test the hypotheses. Moreover, the semi-structured interview used the interview guide approach to lead the flow of conversation (Creswell, 2003). The strength for this interview type is researcher may minimize the logical gaps while research subject involved in interview session. There were fifteen questions which is developed by researcher based on the three indicators. (See Appendix 1)

#### **3.3.2 Instruments**

Instruments are a set of tools for measuring, observing, or documenting the data. In academic research, research may use the existing instrument or modify the existing instrument. Creswell (2014) describes modifying the existing instrument means changing the instrument to fit into our research requirements. Creswell (2014) supposes to apply modified instrument in experimental research. In accordance with that, this section will more describe test and assessment rubrics that will be used as the instrument for measuring the result of observation

#### **1. Test**

Arikunto (2013) defines several instruments in the performance test; they are a questionnaire, interview, observation, and documentation. Accordance with that, the researcher uses performance tests to assess research subjects' performance

by using videos documentation as the instruments. The students who involved as the research subject required to create narrative video. This test is applied in pre- and post-test. Completing the assessment of subjects' performance, the researcher uses the assessment rubric from the tested rubric of Auda (2017).

## **2. Assessment Rubric**

The assessment rubric is a tool to interpret and grade students' work. It has certain criteria and standard for determining the scale of ability (Dickinson and Adams, 2017). Moreover, Richard (2014) describes rubrics as the tool of teacher for assessing and scoring students. An assessment rubric is chosen by considering the advantages of using it based on Richard (2014) in Creating a Rubric. The first advantage is to increase the reliability and validity of assessments. Second, a well-design rubric can improve student performance by clarifying the expectations and the assessment process. The last advantage is reducing the time for evaluating performance. Assessment rubric will provide the description of every point that will be scoring. The assessment rubric will be used for assessing pre- and post-test the DST product.

This research uses an assessment rubric that is adapted from the tested thesis of Auda (2017). The rubric displayed in a thesis entitled "Assessment on Promoting Iraqi EFL Learners' Speaking Skill at the University Level". In this rubric, Auda (2017) used the performance assessment since this model involves scoring on critical thinking, communication, and problem-solving skill. There are six criteria provided in this rubric, in every criterion has four levels. They are a novice, an

intermediate, an advanced, and a superior. The following table is the Speaking Scoring Rubric for scoring students' work:

**Table 1** The displayed of Assessment Rubric

Criteria	Level							
	Point	Superior	Point	Advanced	Point	Intermediate	Point	Novice
Fluency	4	Continuous speech with almost no pauses or hesitations	3	Continuous speech with some pauses to search for adequate words	2	Frequent pauses to organize thoughts and or for lack of vocabulary	1	Frequent long pauses with incomplete thoughts
Grammar	2	No or almost no errors	1.5	Some minor error that do not obscure meaning	1	Many error that do not obscure meaning	0.5	Major errors that obscure meaning
Pronunciation	2	No or almost no errors	1.5	Some minor errors that do not affect communication	1	Many error that do not affect the communication	0.5	Major errors that affect the comprehension
	2	Appropriate use of intonation and rhythm	1.5	Some errors in using intonation and rhythm	1	Inappropriate use of intonation and rhythm	0.5	Use of mother tongue intonation and rhythm
	2	Loud and attractive voice addressed to whole group	1.5	Loud voice but not attractive	1	Low and unattractive to whole group	0.5	Quite low and unattractive voice to near colleagues
Vocabulary	2	Rich use of handout vocabulary	1.5	Some use of handout vocabulary	1	Rare use of handout vocabulary	0.5	Misuse of words for lack of vocabulary
	4	No of use native language	3	Rare use of native language	2	Use of native language for about half the speech	1	Frequent use of words and phrases from the native language
Comprehension	2	Fully understand in certain topic and give appropriate responses	1.5	Understand most of certain topic and respond appropriately	1	Understand some of certain topic and respond appropriately	0.5	Do not understand the topic to be delivered and need replying

Source: A rubric was adapted from Assessment on Promoting Iraqi EFL Learner' Speaking Skill at the University Level (Auda, 2017)

### 3. Interview Guideline

As mentioned in techniques part, this research used interview for collecting the data. The interview guideline is constructed to lead the conversation during the interview lead to the goals of interview. In addition, researcher used semi-structured interview to arise the question from the situation while the interview session. Moreover, the interview guideline is formed based on the theory which put in the part review of related literature.

#### 3.3.3 Procedure

Research procedures fundamentally are a structural plan to determine the fixed result of the study. Moreover, research procedure is a set of steps for collecting the data. There are six stages in this research for collecting the data, as follows:

1. Preparing the instruments for collecting the data such as scoring rubrics, interview guideline.
2. Downloading the students' video DST that were submitted YouTube link in the Trello digital platform.
3. Transcribing the whole students' video DST.
4. Preparing the interview guideline.
5. Conducting the semi-structured interview with the students.
6. Transcribing the results of the interview.

By completing all procedures, the data is collected and organized well. In last, to know the result of the data, all the data need to be analysed.

### **3.4 Data Analysis**

In this research, the sequence for analysing the data is quantitative to qualitative. It means the primary data that will be proceed is quantitative data, afterwards in the qualitative data. The further description on the step for analysing the data is follow:

#### **1. Assessing Students' Video DST**

The first step for analysing the quantitative data is transcribing the video. The transcription will be analysed by using the assessment rubric which is mentioned in instruments. All of the transcriptions are counted manually. The analysis results of the manual calculation were provided in the table below:

**Table 2 Sheet for Manual Calculation of Video DST**

No	Names	First DST					Total Score
		Fluency	Grammar	Pronunciation	Vocabulary	Comprehension	
1	A						
2	B						
3	C						
4	D						
5	E						
6	F						

After calculating the score manually, SPSS is applied to analyse the significance of students' score who used DST. Specifically, the paired *t*-test is applied to calculate the significance of results of the Video DST.

## **2. Transcription of The Interview**

Collecting the qualitative data, the researcher applied the semi-structured interview. Researcher uses the data recording which are transcribed, the transcriptions are analysed and grouped into two categories to indicate the positive or negative attitudes. Furthermore, the result of data reduction will be correlated into the theory. In last, the result of data correlation with theory will be compared with quantitative data. If the results of both them are positive it indicates that DST is success applied in ESP Speaking.